

Guarico Sub-Basin, Assessment Unit 60980102
Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Field Type	MFS	Prob. (0-1)	Undiscovered Resources												Largest Undiscovered Field (MMBO or BCFG)			
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)				F95	F50	F5	Mean
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean				
Oil Fields	1	1.00	116	364	715	385	216	709	1,532	771	12	41	97	46	19	54	150	65
Gas Fields	6						5,183	15,422	29,813	16,224	213	660	1,405	714	705	1,833	4,192	2,056
Total		1.00	116	364	715	385	5,399	16,131	31,346	16,995	225	701	1,502	760				

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Monte Carlo Results

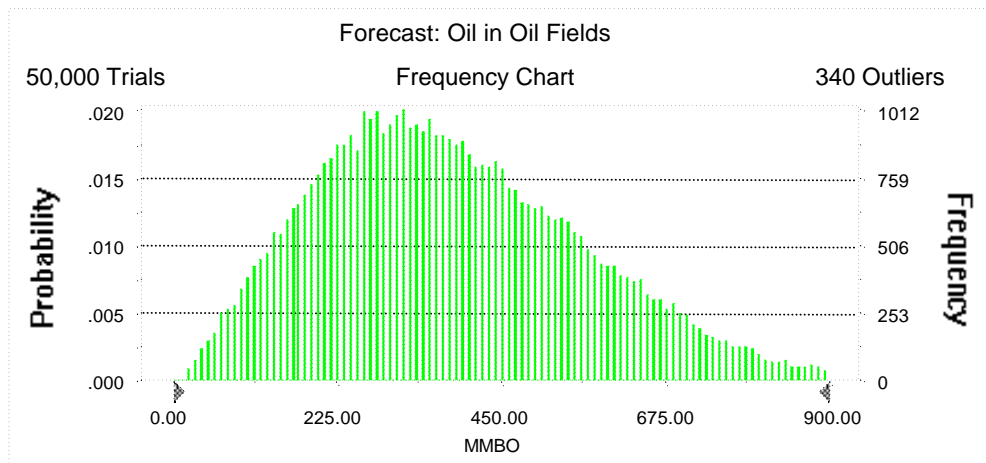
Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 900.00 MMBO
Entire range is from 13.79 to 1,443.87 MMBO
After 50,000 trials, the standard error of the mean is 0.82

Statistics:

	<u>Value</u>
Trials	50000
Mean	384.69
Median	363.69
Mode	---
Standard Deviation	184.41
Variance	34,006.51
Skewness	0.54
Kurtosis	3.03
Coefficient of Variability	0.48
Range Minimum	13.79
Range Maximum	1,443.87
Range Width	1,430.08
Mean Standard Error	0.82



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	13.79
95%	115.96
90%	159.06
85%	192.55
80%	221.38
75%	246.94
70%	270.93
65%	293.82
60%	317.13
55%	340.35
50%	363.69
45%	388.30
40%	414.21
35%	442.09
30%	471.60
25%	505.12
20%	541.42
15%	584.04
10%	638.72
5%	715.14
0%	1,443.87

End of Forecast

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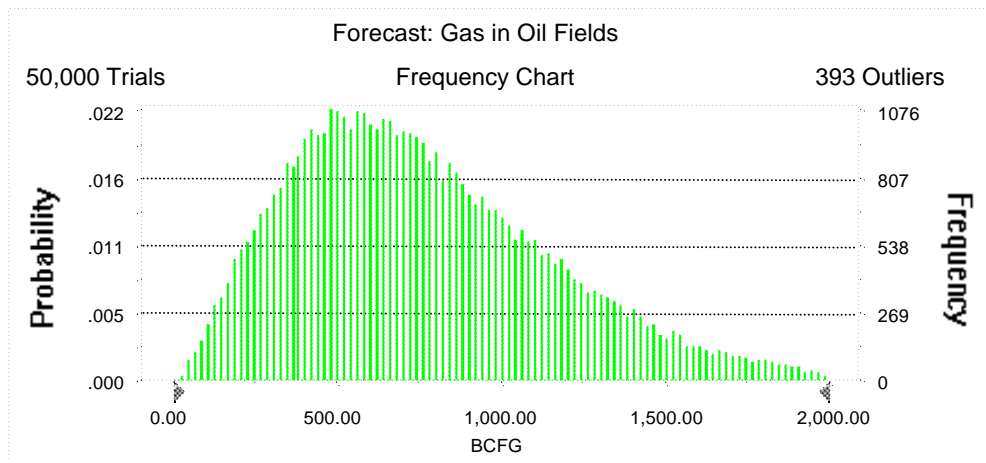
Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 2,000.00 BCFG
Entire range is from 23.90 to 3,583.05 BCFG
After 50,000 trials, the standard error of the mean is 1.83

Statistics:

	<u>Value</u>
Trials	50000
Mean	771.18
Median	709.20
Mode	---
Standard Deviation	408.62
Variance	166,970.51
Skewness	0.83
Kurtosis	3.76
Coefficient of Variability	0.53
Range Minimum	23.90
Range Maximum	3,583.05
Range Width	3,559.15
Mean Standard Error	1.83



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	23.90
95%	216.02
90%	296.26
85%	360.24
80%	415.95
75%	466.21
70%	513.97
65%	562.35
60%	610.03
55%	659.15
50%	709.20
45%	759.92
40%	814.50
35%	874.31
30%	940.96
25%	1,014.14
20%	1,098.98
15%	1,198.13
10%	1,329.43
5%	1,532.18
0%	3,583.05

End of Forecast

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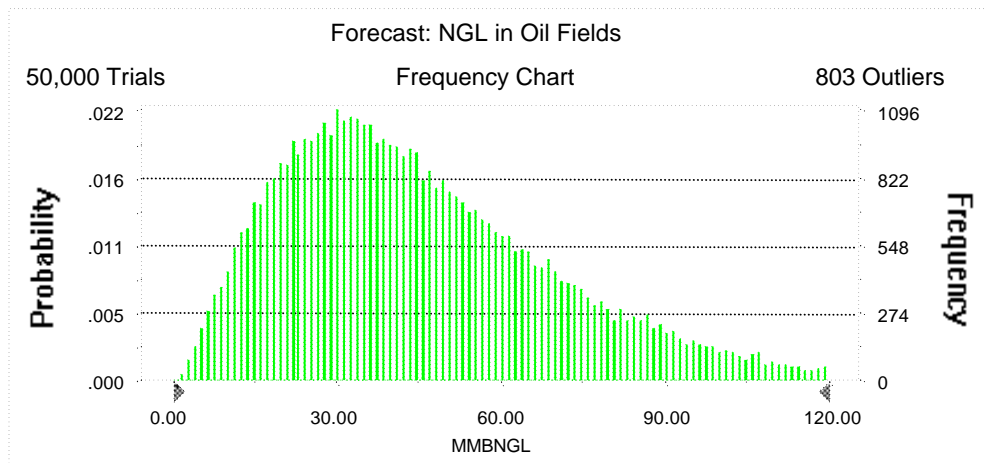
Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 120.00 MMBNGL
Entire range is from 1.20 to 251.61 MMBNGL
After 50,000 trials, the standard error of the mean is 0.12

Statistics:

	<u>Value</u>
Trials	50000
Mean	46.20
Median	41.27
Mode	---
Standard Deviation	26.68
Variance	711.68
Skewness	1.07
Kurtosis	4.58
Coefficient of Variability	0.58
Range Minimum	1.20
Range Maximum	251.61
Range Width	250.41
Mean Standard Error	0.12



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.20
95%	12.09
90%	16.63
85%	20.23
80%	23.46
75%	26.59
70%	29.53
65%	32.34
60%	35.20
55%	38.13
50%	41.27
45%	44.50
40%	47.96
35%	51.78
30%	56.03
25%	60.81
20%	66.31
15%	73.14
10%	82.49
5%	96.69
0%	251.61

End of Forecast

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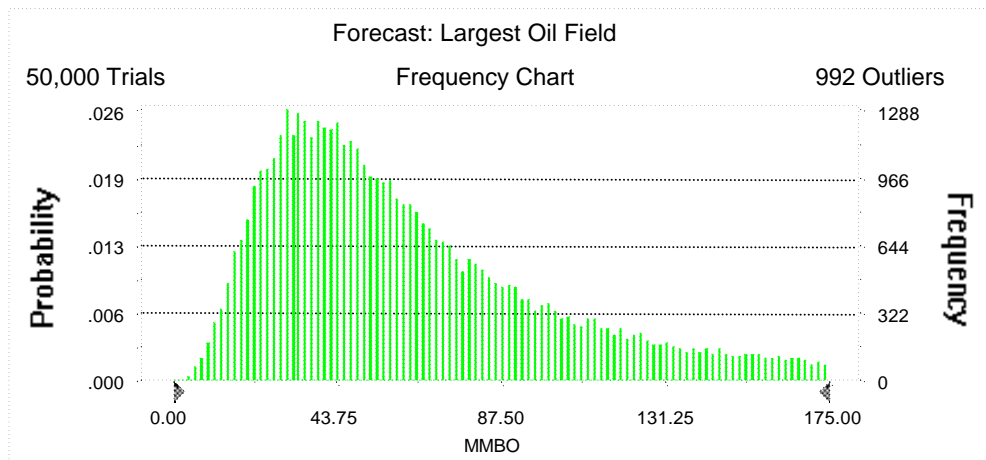
Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 175.00 MMBO
Entire range is from 3.35 to 199.99 MMBO
After 50,000 trials, the standard error of the mean is 0.18

Statistics:

	<u>Value</u>
Trials	50000
Mean	64.60
Median	54.12
Mode	---
Standard Deviation	39.87
Variance	1,589.61
Skewness	1.15
Kurtosis	3.91
Coefficient of Variability	0.62
Range Minimum	3.35
Range Maximum	199.99
Range Width	196.64
Mean Standard Error	0.18



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	3.35
95%	18.57
90%	23.70
85%	27.93
80%	31.50
75%	35.08
70%	38.75
65%	42.34
60%	45.95
55%	49.84
50%	54.12
45%	58.69
40%	63.77
35%	69.31
30%	75.97
25%	83.92
20%	93.59
15%	106.05
10%	123.19
5%	150.34
0%	199.99

End of Forecast

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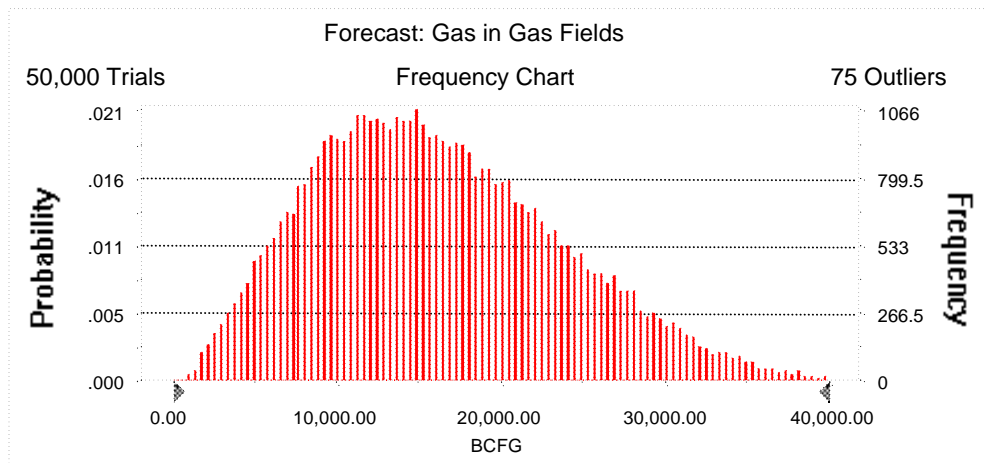
Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 40,000.00 BCFG
Entire range is from 672.77 to 48,692.59 BCFG
After 50,000 trials, the standard error of the mean is 33.60

Statistics:

	<u>Value</u>
Trials	50000
Mean	16,223.76
Median	15,421.66
Mode	---
Standard Deviation	7,513.37
Variance	56,450,694.03
Skewness	0.47
Kurtosis	2.81
Coefficient of Variability	0.46
Range Minimum	672.77
Range Maximum	48,692.59
Range Width	48,019.83
Mean Standard Error	33.60



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Monte Carlo Results

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	672.77
95%	5,182.62
90%	6,960.08
85%	8,360.70
80%	9,495.82
75%	10,530.78
70%	11,530.05
65%	12,506.91
60%	13,489.13
55%	14,467.96
50%	15,421.66
45%	16,459.24
40%	17,527.78
35%	18,651.91
30%	19,868.37
25%	21,187.02
20%	22,677.95
15%	24,461.92
10%	26,705.84
5%	29,813.36
0%	48,692.59

End of Forecast

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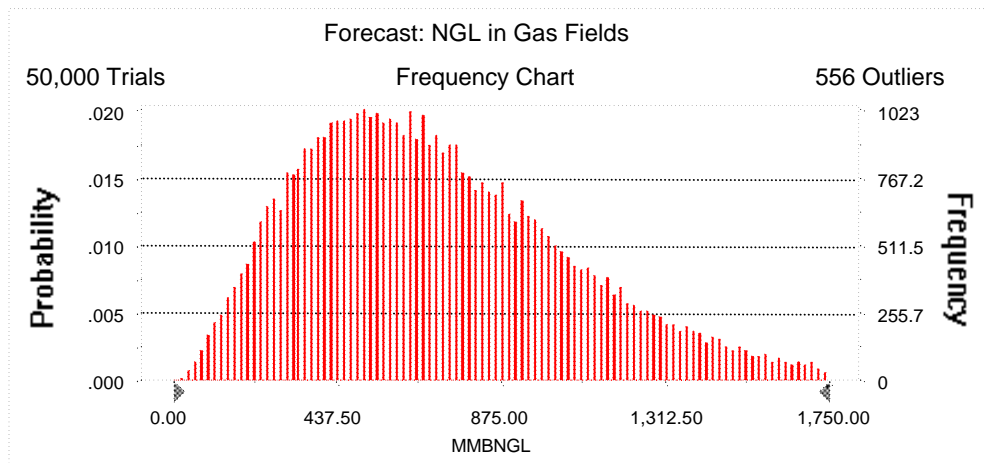
Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 1,750.00 MMBNGL
Entire range is from 26.61 to 2,676.04 MMBNGL
After 50,000 trials, the standard error of the mean is 1.65

Statistics:

	<u>Value</u>
Trials	50000
Mean	713.69
Median	659.68
Mode	---
Standard Deviation	368.19
Variance	135,562.00
Skewness	0.78
Kurtosis	3.53
Coefficient of Variability	0.52
Range Minimum	26.61
Range Maximum	2,676.04
Range Width	2,649.43
Mean Standard Error	1.65



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	26.61
95%	213.38
90%	283.46
85%	341.17
80%	391.42
75%	437.75
70%	481.98
65%	525.28
60%	569.08
55%	613.71
50%	659.68
45%	705.85
40%	755.12
35%	808.51
30%	870.04
25%	935.61
20%	1,007.20
15%	1,100.02
10%	1,217.32
5%	1,404.88
0%	2,676.04

End of Forecast

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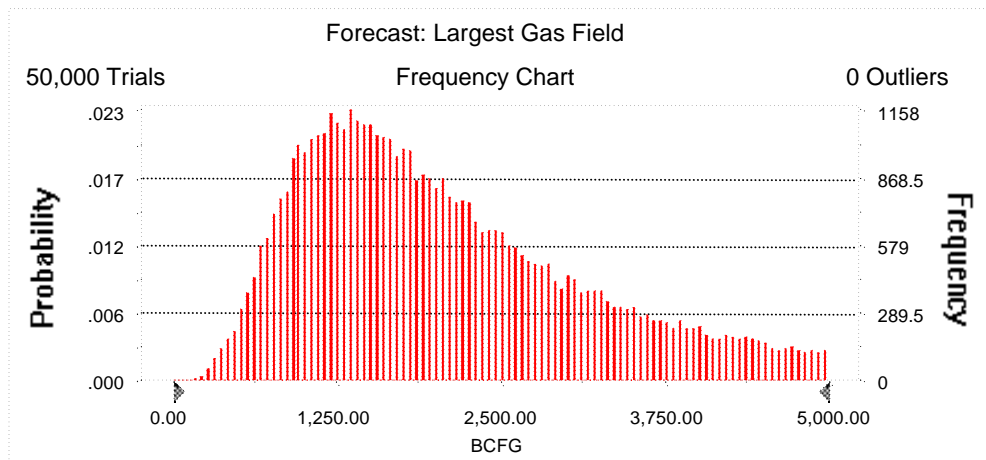
Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 5,000.00 BCFG
Entire range is from 115.51 to 4,999.85 BCFG
After 50,000 trials, the standard error of the mean is 4.70

Statistics:

	<u>Value</u>
Trials	50000
Mean	2,056.45
Median	1,833.47
Mode	---
Standard Deviation	1,051.06
Variance	1,104,725.87
Skewness	0.75
Kurtosis	2.88
Coefficient of Variability	0.51
Range Minimum	115.51
Range Maximum	4,999.85
Range Width	4,884.34
Mean Standard Error	4.70



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	115.51
95%	704.78
90%	879.14
85%	1,008.70
80%	1,131.16
75%	1,245.14
70%	1,358.73
65%	1,469.46
60%	1,586.49
55%	1,705.75
50%	1,833.47
45%	1,975.09
40%	2,124.92
35%	2,285.48
30%	2,476.68
25%	2,686.18
20%	2,940.70
15%	3,250.25
10%	3,642.93
5%	4,191.64
0%	4,999.85

End of Forecast

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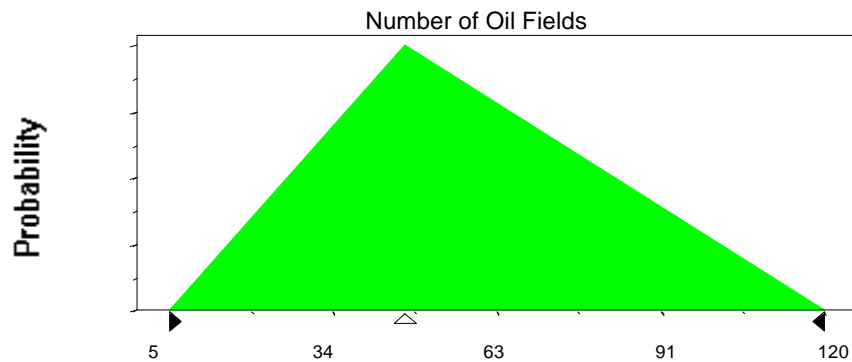
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	5
Likeliest	47
Maximum	120

Selected range is from 5 to 120
Mean value in simulation was 57



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	6.06
Standard Deviation	17.32

Shifted parameters

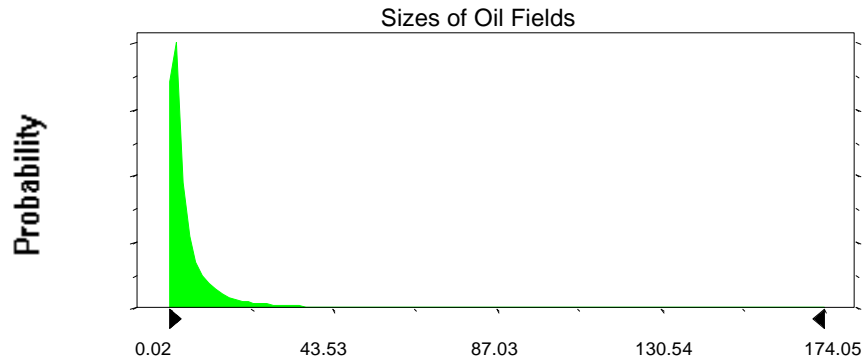
7.06
17.32

Selected range is from 0.00 to 199.00
Mean value in simulation was 5.81

1.00 to 200.00
6.81

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Assumption: Sizes of Oil Fields (cont'd)



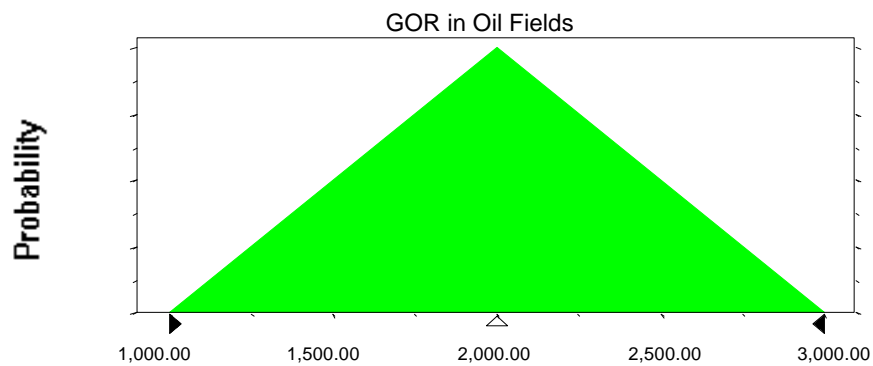
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,000.00
Likeliest	2,000.00
Maximum	3,000.00

Selected range is from 1,000.00 to 3,000.00

Mean value in simulation was 2,004.63



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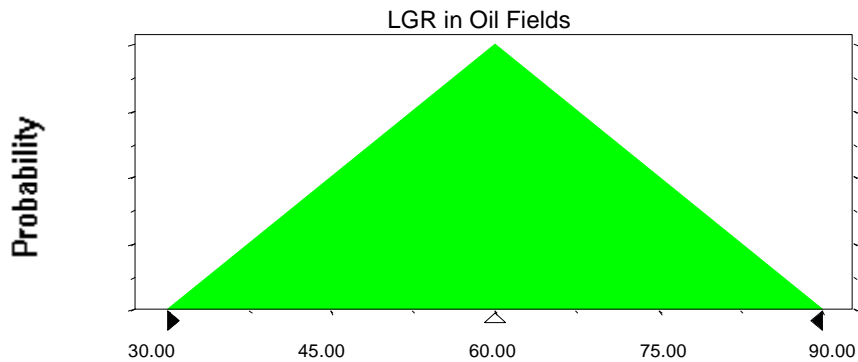
Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	30.00
Likeliest	60.00
Maximum	90.00

Selected range is from 30.00 to 90.00

Mean value in simulation was 59.92



Assumption: Number of Gas Fields

Triangular distribution with parameters:

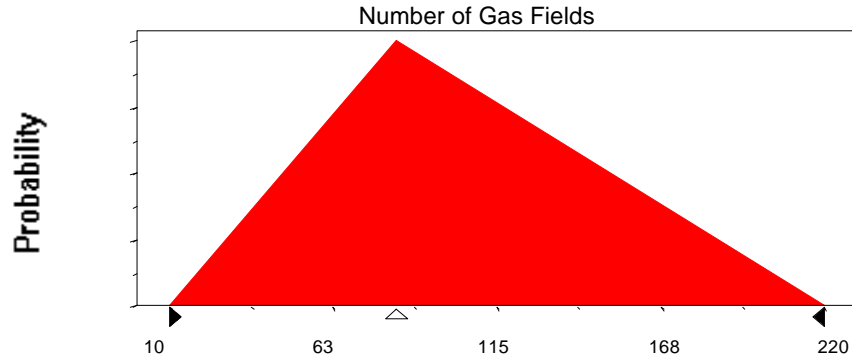
Minimum	10
Likeliest	83
Maximum	220

Selected range is from 10 to 220

Mean value in simulation was 104

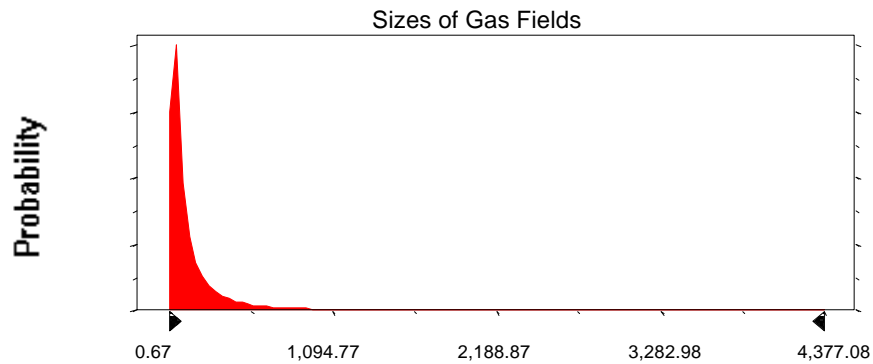
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters	
Mean	157.93		163.93
Standard Deviation	434.07		434.07
Selected range is from 0.00 to 4,994.00		6.00 to 5,000.00	
Mean value in simulation was 149.94		155.94	



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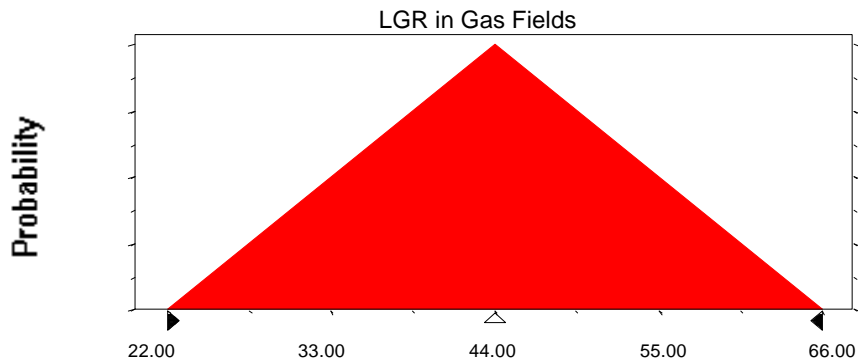
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00

Mean value in simulation was 43.97



End of Assumptions

Simulation started on 7/16/99 at 10:28:18

Simulation stopped on 7/16/99 at 11:43:16